

PCT

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03500.017653

PATENT APPLICATION



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
TAKASHI KENMOKU ET AL. )  
Application No.: 10/531,689 )  
International Appln No. PCT/JP03/13531 )  
Filed: October 23, 2003 )  
For: NOVEL )  
POLYHYDROXY ALKANOATE )  
COPOLYMER INCLUDING )  
WITHIN ITS MOLECULE UNIT )  
HAVING VINYL GROUP OR )  
CARBOXYL GROUP IN SIDE )  
CHAIN AND PRODUCING )  
METHOD THEREFOR :  
Examiner: Not Yet Assigned  
Group Art Unit: 1645  
August 11, 2005

**Mail Stop PCT**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

SECOND INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed Form PTO-1449. Since the U.S. Patent and Trademark Office waived the requirement under 37 C.F.R. § 1.98 (a)(2)(i) for submitting a copy of each cited U.S. patent and each U.S. patent application publication for all U.S. national patent applications and for all international applications that have entered the national stage under 35 U.S.C. § 371, no copies of such documents are enclosed.

Copies of the other listed documents are enclosed.

The Examiner's attention is also directed to the following U.S. Applications:

<u>APPLICATION NO.</u>	<u>FILING DATE</u>	<u>GROUP ART UNIT</u>
10/531,572	October 23, 2003	1761
10/531,226	October 23, 2003	1711
11/062,816	February 23, 2005	1632

Since these applications are stored in the U.S. Patent and Trademark Office's IFW system, copies thereof are not enclosed due to a sua sponte waiver of 37 C.F.R. § 1.98(a)(2)(iii).

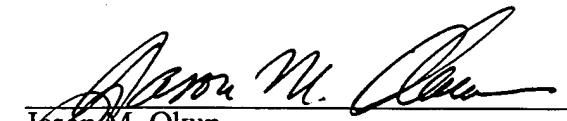
The concise explanation of relevance for the non-English documents may be found, inter alia, in the English language abstracts attached thereto and/or in the specification where they are cited. Also, the concise explanation of relevance for JP 2002-80571 may be found in U.S. Patent Nos. 6,586,562 B2 and 6,649,381 B1 and U.S. Patent Application Publication No. 2004/0067576 A1, which are all in the same patent family.

#### CONCLUSION

It is respectfully requested that the above information be considered by the Examiner and that a copy of the enclosed Form PTO-1449 be returned indicating that such information has been considered.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

  
\_\_\_\_\_  
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ATTY DOCKET NO.  
**03500.017653**APPLICATION NO.  
**10/531,689**

## APPLICANT

**Takashi Kenmoku et al.**

## FILING DATE

**October 23, 2003**

## GROUP

**1645**

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2003/0207412 A1	11/06/03	Kenmoku et al.	435	135	
	6,645,743 B1	11/11/03	Honma et al.	435	146	
	6,649,380 B1	11/18/03	Yano et al.	435	135	
	2003/0194789 A1	10/16/03	Honma et al.	435	135	
	2003/0113368 A1	06/19/03	Nomoto et al.	424	450	
	6,911,521 B2	06/28/05	Kenmoku et al.	528	295	
	2004/0092702 A1	05/13/04	Honma et al.	528	272	
	6,635,782 B2	10/21/03	Honma et al.	560	53	

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES/NO/ OR ABSTRACT
JP	2002-80571	03/19/02	Japan			Abstract
JP	59-190945	10/29/84	Japan			Abstract
JP	2989175 B1	10/08/99	Japan			Abstract
WO	2004/037889 A1	05/06/04	International			
WO	2004/097417 A1	11/11/04	International			

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	Katharina Fritzsche et al., "An Unusual Bacterial Polyester with a Phenyl Pendant Group," 191 Macromol. Chem. 1957-65 (1990).
	Y.B. Kim et al., "Preparation and Characterization of Poly( $\beta$ -Hydroxyalkanoates) Obtained from <i>Pseudomonas oleovorans</i> with Mixtures of 5-Phenylvaleric Acid and <i>n</i> -Alkanoic Acids," 24 Macromol. 5256-60 (1991).
	Suzette M. Aróstegui et al., "Bacterial Polyesters Produced by <i>Pseudomonas oleovorans</i> Containing Nitrophenyl Groups," 32 Macromol. 2889-95 (1999).
	Helmut Ritter et al., "Bacterial Production of Polyesters Bearing Phenoxy Groups in Side Chains, 1 Poly(3-Hydroxy-5-Phenoxypentanoate- co-3-Hydroxy-9-Phenoxy-Nonanoate) From <i>Pseudomonas oleovorans</i> ," 195 Macromol. Chem. Phys. 1665-72 (1994).

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 1 of 2

FORM PTO 1449 ( <i>modified</i> )  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary)			ATTY DOCKET NO. <b>03500.017653</b>		APPLICATION NO. <b>10/531,689</b>		
			APPLICANT <b>Takashi Kenmoku et al.</b>				
			FILING DATE <b>October 23, 2003</b>		GROUP <b>1645</b>		
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		<b>6,872,788 B2</b>	<b>03/29/05</b>	<b>Imamura et al.</b>	<b>525</b>	<b>440</b>	
		<b>6,492,147 B1</b>	<b>12/10/02</b>	<b>Imamura et al.</b>	<b>435</b>	<b>135</b>	
		<b>2003/0180899 A1</b>	<b>09/25/03</b>	<b>Honma et al.</b>	<b>435</b>	<b>135</b>	
		<b>6,521,429 B2</b>	<b>02/18/03</b>	<b>Honma et al.</b>	<b>435</b>	<b>135</b>	
		<b>6,586,562 B2</b>	<b>07/01/03</b>	<b>Honma et al.</b>	<b>528</b>	<b>361</b>	
		<b>6,649,381 B1</b>	<b>11/18/03</b>	<b>Honma et al.</b>	<b>435</b>	<b>135</b>	
		<b>2004/0067576 A1</b>	<b>04/08/04</b>	<b>Honma et al.</b>	<b>435</b>	<b>252.34</b>	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES/NO/ OR ABSTRACT
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)							
		<b>Richard A. Gross et al., "Cyanophenoxy-Containing Microbal Polyesters: Structural Analysis, Thermal Properties, Second Harmonic Generation and In-Vivo Biodegradability," 39 <u>Polymer International</u> 205-13 (1996).</b>					
		<b>Won Ho Park et al., "Epoxidation of Bacterial Polyesters with Unsaturated Side Chains. I. Production and Epoxidation of Polyesters from 10-Undecanoic Acid," 31 <u>Macromol.</u> 1480-1486 (1998).</b>					
		<b>Ohyoung Kim et al., "Bioengineering of Poly( <math>\beta</math>-hydroxyalkanoates) for Advanced Material Applications: Incorporation of Cyano and Nitrophenoxy Side Chain Substituents," 41 (Supp. 1) <u>Can. J. Microbiol.</u> 32-43 (1995).</b>					
		<b>Young B. Kim et al., "Poly( <math>\beta</math>-hydroxyalkanoate) Copolymers Containing Brominated Repeating Units Produced by <i>Pseudomonas oleovorans</i>," 25 <u>Macromol.</u> 1852-57 (1992).</b>					
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<b>OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
		<b>Marieta Constantin et al., "Chemical Modification of Poly(hydroxyalkanoates). Copolymers Bearing Pendant Sugars," 20 <i>Macromol. Rapid Commun.</i> 91-94 (1999).</b>					
		<b>M.Y. Lee et al., "Hydrophilic Bacterial Polyesters Modified with Pendant Hydroxyl Groups," 41 <i>Polymer</i> 1703-09 (2000).</b>					
		<b>J.K. Stille et al., "Tetracyclic Dienes. I. The Diels-Alder Adduct of Norbornadiene and Cyclopentadiene," 81 <i>J. Am. Chem. Soc.</i> 4273-75 (August 1959).</b>					
		<b>G.J.M. de Koning et al., "A Biodegradable Rubber by Crosslinking Poly(hydroxyalkanoate) From <i>Pseudomonas oleovorans</i>," 35 (10) <i>Polymer</i> 2090-97 (1994).</b>					
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Sheet 4 of 4